

## **RESEARCH PROBLEM STATEMENT #TS-510**

### **I – Problem Title**

Advanced CMS (2004Mob.12)

### **II – Research Problem Statement**

Model 500 CMS was developed approximately 15 years ago. Current sign design is outdated, not cost or energy efficient. Districts have already installed non-standard Changeable Message Signs. Without CMS Standardization, divergent protocols, both electrical and mechanical will proliferate, diminishing the prospect for volume purchases and uniformity of field element capabilities and performance on the state highways.

### **III – Objective**

Research the latest CMS technology being utilized nationwide and develop plans and specifications for a new family of NTCIP compliant Changeable Message Signs.

### **IV – Background**

With the latest technology, a sign can be designed with more options and features as well being energy efficient. Districts have already installed non-standard Changeable Message Signs.

### **V – Statement of Urgency and Benefits**

Somewhat urgent since purchases are being made without an updated standard already. The benefit of addressing this problem is consistent CMS purchasing statewide and the typical benefits of standardization.

### **VI – Related Research**

(None identified)

### **VII – Deployment Potential**

2 years after the plans and specs are complete